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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/594,109

09/25/2006

Ulrich Mundwiler

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03/04/2009

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EXAMINER

MAI, HAO D

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/594,109	Applicant(s) MUNDWILER ET AL.	
	Examiner HAO D. MAI	Art Unit 3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Terminal Disclaimer

1. The terminal disclaimer filed 10/21/2008 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent No. 7,329,124 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Objections

2. **Claims 18-20 and 33-35** are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. The claims recites a combination (implant and abutment), which is inconsistent with the subcombination (implant) recited in the independent claim 32. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

3. **Claim 22** is objected to for the following informalities: 600 and 800 should be 60° 80° respectively.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 17-20, 31, and 46, are rejected under 35 U.S.C. 102(b) as being anticipated by Hollander et al. (6,648,643).**

Regarding claim 17, Hollander et al. disclose an intraosteal dental implant 22 (Fig. 2) including a bore 28 in the form a blind hole; the bore 28 is shaped and devised such that it is

Art Unit: 3732

capable of rotationally secure an abutment receivable in the dental implant. The implant having an outer profile 23 substantially radially symmetrical to a central (longitudinally) axis. The bore is further provided with a substantially cylindrical sleeve 40 extending substantially coaxially to the dental implant 22, wherein the dental implant includes an inner neck surface (radial surface 30) capable of engaging a complementary surface of the abutment, e.g. portion 54. The sleeve 40 extend beyond the inner neck surface and defines at least one intersection curve 34 between the inner neck surface and the sleeve portion 52/56; wherein the intersection curve 34 is not lying in a plane perpendicular to the central (longitudinal) axis of the implant.

As to claims 18-20, the abutment is not actively claimed or positively recited; thus the abutment and any further limitation thereof are not given patentable weights (also see above objection to the claims). As to claims 31 and 46, Hollander et al. show slits between portions 52/56 of sleeve 40 (Fig. 2).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 21-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hollander et al. in view of Cottrell (2003/0104337 A1).**

Hollander et al. disclose the invention substantially as claimed, including a bone tissue apposition surface (threaded outer surface) extending from the implant's tip 26 up to an interface at a neck portion 32; and a soft tissue apposition surface (non-threaded outer surface) extending from the interface to the shoulder 24. However, Hollander fails to disclose the shoulder being inclined and the interface having a curved profile.

Cottrell discloses a dental implant 40 having a shoulder (coronal aspect 52) that is inclined with respect to the central longitudinal axis of the implant (Figs. 6-12; abstract). Cottrell also discloses an inclination to the shoulder ranging from 60°-80° (Fig. 10-11); and a variety of curved profile to the interface (Fig. 9, 12). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hollander et al. by incorporate an incline to the implant's shoulder and a curved profile to the interface in order to conform with the bone and alveolar protrusion and preserve or encourage bone growth at the bone/alveolar protrusion.

8. Claims 32-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suarez (5,752,830) in view of Huang (5,984,681).

Regarding claim 32, Suarez discloses a dental implant 10 (Fig. 1A) including a bore 14 in the form a blind hole, the bore being shaped and devised so that it is capable of rotationally securing an abutment receivable in the dental implant. The dental implant has an outer profile substantially radially symmetrical to a central (longitudinal) axis. Suarez further discloses the bore 14 being provided with a sleeve 30 (Fig. 2) extending coaxially to the dental implant (Fig. 7). However, Suarez fails to disclose the sleeve being substantially cylindrical; and the dental implant including an inner neck surface with a substantially conical shape with an imaginary tip offset from the axis of the implant.

Huang discloses an implant having bore 24 with an inner neck surface, i.e. the counter sunk upper seat that that receives the head 30 of anchoring pin 26 (Figs. 4, 6, 8; column 6 lines 28-42). The inner neck surface is shown to have a substantially conical shape with an imaginary tip offset from the axis 60 of the implant. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Suarez by incorporating additional bore with inner neck surface offset from the implant's central axis for receiving an

Art Unit: 3732

anchoring pin in order to effectively and securely anchor the implant to the alveolar bone and prevent the implant from rotating or loosening while a load or stress is being placed on the implant as explicitly taught by Huang (column 6 lines 28-42).

Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the shape of the bore 14 and sleeve 30 of Suarez to be substantially cylindrical. Such modification(s) are merely a change in shape and/or configurations, which is a matter of design choice well within the skill of an artisan in order to obtain optimum results. See MPEP § 2144.04.

As to claim 33-35, note that the abutment is not actively claimed or positively recited; thus the abutment and any further limitation thereof are not given patentable weights (also see above objection to the claims). Nonetheless, note that Huang shows the abutment/anchoring pin 26 having a downward extending protrusion with a lower surface (head 30) that exactly matches the inner neck surface; and the sleeve as shown by Suarez further has a screw 35 which fits into the sleeve with no or very little play.

9. Claims 36-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suarez in view of Huang, and further in view of Cottrell (2003/0104337 A1).

Suarez/Huang disclose the invention substantially as claimed, including a bone tissue apposition surface (threaded outer surface); and a soft tissue apposition surface (non-threaded outer surface). However, Suarez/Huang fail to disclose the shoulder being inclined and the interface having a curved profile.

Cottrell discloses a dental implant 40 having a shoulder (coronal aspect 52) that is inclined with respect to the central longitudinal axis of the implant (Figs. 6-12; abstract). Cottrell also discloses an inclination to the shoulder ranging from 60°-80° (Fig. 10-11); and a variety of curvature to the interface (Fig. 9, 12). It would have been obvious to one having ordinary skill in

Art Unit: 3732

the art at the time the invention was made to modify Hollander et al. by incorporate an incline to the implant's shoulder and a curved profile to the interface in order to conform with the bone and alveolar protrusion and preserve or encourage bone growth at the bone/alveolar protrusion.

Response to Arguments

10. Applicant's amendment/arguments filed 10/21/2008 have been fully considered and are persuasive and/or moot in view of new ground(s) of rejection.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HAO D. MAI whose telephone number is (571)270-3002. The examiner can normally be reached on Monday-Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris Rodriguez can be reached on (571) 272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hao D Mai/
Examiner, Art Unit 3732

/Cris L. Rodriguez/
Supervisory Patent Examiner, Art Unit 3732